

Remarks/Arguments:

Following receipt and review of the Office Action mailed on June 6, 2004, Applicants have amended this application as hereinabove set forth. For the following reasons, Applicants request reconsideration of this application and allowance of the application as amended.

I. Objection to the drawings.

In response to the Examiner's proper objection to the drawings, Applicants have amended the first full paragraph in page 12 by deleting the reference numeral "10" and by inserting the words "an edge 17" in the sentence "holding a printing plate precursor 15" which now reads: "holding an edge 17 of a printing plate precursor 15".

Numeral 10 is superfluous. The specification refers to the specific elements of the typesetter illustrated in figure 1 representing the typesetter in the sentences immediately following the reference to a typesetter.

The introduction of the words "an edge 17" simply state what is obvious in figure 1. Clearly the numeral 17 refers to the plate edge, therefore no new matter has been introduced.

Withdrawal of the objection to the drawings is, therefore, respectfully requested.

II. Objections to the specification.

Applicants have amended the two full paragraphs in page 12 of the specification to correct the informalities properly pointed out by the Examiner. The word "roller" has been amended to read "rollers" and the word "no" has been amended to read "not".

Withdrawal of the objection is respectfully requested.

III. Objections to the claims.

The Examiner objected to the following claims: 1, 7-9, 11, 12, 13, 18-22.

Claim 11 has been amended to change its dependency from claim 9 to claim 10.

Claims 18-22 have been amended to add the word "of" ahead of the word "visible".

Claim 1 has been amended to positively claim the areas that are undesirably not exposed during the imagewise exposure. Claim 12 now depends of claim 1. As amended claim 1 now reads in pertinent part:

"...wherein said imagewise exposure (i) generates imagewise exposed and unexposed areas of said plate and (ii) generates undesirably unexposed areas due to unwanted shading during said imagewise exposure ..."

Applicants believe that claims 1 and 12 as originally written clearly distinguished the areas subject to exposure to the second frequency spectrum from unexposed areas in the imagewise exposed area of the precursor (which of course includes both exposed and unexposed areas) since these unexposed areas in the image are not "undesirably unexposed" but are part of the image and, therefore desirably unexposed. However, Applicants have amended these claims to clarify that the undesirably unexposed areas subject to the second frequency spectrum exposure do not include intentionally unexposed areas forming part of the image.

Claim 13 has been amended for other reasons rendering the examiner's question regarding the need to insert the word "by" ahead of the word "developing" moot.

Claims 7-9 and claims 18-20 have been amended to conform to the language of the amended claim 1 by replacing the words "undesirably shaded areas" with the words "undesirably unexposed areas".

Therefore, applicants request that the Examiner's objection to claims 1, 7-9, 12, and 18-20 be withdrawn.

IV. Claims objected to but indicated as allowable.

Claims 5-6, 16-17 and 21-22 are indicated as allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Claim 5 has been so rewritten. Claim 6 depends of claim 5. Claims 8-9 have been amended to also depend of claim 5. Claims 16-20 have been amended to depend either directly or indirectly of claim 5. Claim 21 has been cancelled and replaced with new claim 28 written in independent form and incorporating all the limitations of the base claim and any intervening claims of claim 21. Claim 22 is dependent on claim 28.

Following this amendment applicants believe that claims 5-6, 8-9, 16-20, 22 and 28 are now in proper condition for allowance, and such is earnestly solicited.

V. Rejection of claims under 35 U.S.C. § 102.

Claims 1-3 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,340,699 to Haley et al. Claims 2 and 3 are dependent claims dependent of claim 1.

With respect to claim 1, the Examiner's argument in support of the rejection is that Haley et al. teaches a method for forming a printing plate comprising a printing plate precursor comprising a radiation-sensitive layer, said radiation sensitive layer exhibiting sensitivity to radiation in a first frequency spectrum and to radiation in a second frequency spectrum other than said first frequency spectrum, the method comprising imagewise exposing said printing plate precursor to said radiation in said first frequency spectrum and exposing to radiation in said second frequency spectrum any areas of said plate subject to undesirable shading during said imagewise exposure.

Applicants respectfully traverse this rejection. Haley et al. does not teach exposing to radiation in said second frequency spectrum only areas of the plate subject to undesirable shading during said imagewise exposure, as explained in the present specification. Haley et al. teaches a printing plate precursor sensitive to both IR and UV radiation which may function as either a positive or a negative working plate. (See column 2 lines 62-69). The dual sensitivity, according to Haley et al. may be used to combine digital and electronic imaging techniques with conventional optical imaging techniques so that information not available in an electronic format can be added by optical imaging to complete the imaging of the lithographic printing plate when it is desired to do so. (Column 3, lines 30-50, particularly lines 43-50.)

The dual nature of the Haley et al. printing plate precursor is obtained, according to the disclosure (Column 3 lines 50-61) by exposing imagewise the precursor to imaging radiation to form a positive working plate, and providing an overall heating exposure of the imagewise exposed plate to convert the positive working plate to a negative working plate.

Claims 1-3 and the present disclosure do not claim or disclose a dual function plate of the type discussed in Haley et al, or a method for converting a dual sensitivity precursor to either a positive or a negative working plate.

To the contrary, as is clearly stated in claim 1, the second radiation exposure step is one that exposes any areas of the plate (which may be one of positive or negative working) that are undesirably left unexposed during the imagewise exposure typically due to undesirable shading during the imaging exposure, not the plate overall, as taught by Haley et al. The specification explains that the "undesirably unexposed areas" are the areas under the clamps or other holding devices securing the plate onto a supporting base during imagewise exposure, and areas that, were they not shaded,

would have been fully exposed by the imaging radiation. See inter alia, page 3, line 34 to page 4 line 1 which reads: *"The undesirable shading is, typically, the result of applying clamping devices on the printing plate precursor to hold the precursor in place during the imagewise exposure."*

Thus Haley et al. fails to disclose all the claimed steps in original claim 1 and therefore does not anticipate the process claimed in the original claim 1. Claim 1, however, has been amended for other reasons as explained below. The amended claim 1 now also requires that the exposure to the second radiation is a pre-exposure of the precursor prior to the precursor mounting on the exposure device for the imagewise exposure. Nothing in Haley et al. suggests such step.

For the same reason, Haley et al. also fails to anticipate claims 2-3 which are dependent of claim 1 and therefore include all the limitations of claim 1. Therefore Applicants request that the rejection under 35 U.S.C. 102(b) of claims 1-3 be reconsidered and withdrawn.

Claims 12-14 and 23-26 are rejected under 35 U.S.C. § 102(b) in view of U.S. patent No. 5,962,192, Holman, III et al. hereinafter "Holman", for the following reasons:

"With respect to claims 12-14, Holman, III et al. teaches a method for forming a printing plate comprising a heat sensitive printing plate precursor, said heat sensitive precursor comprising a photothermal conversion material, and said precursor also exhibiting sensitivity to at least one of visible and ultraviolet radiation, see column 3, lines 40-65, the method comprising exposing by imagewise heating said printing plate precursor, see column 4, lines 24-39, exposing to at least one of said visible and ultraviolet radiation any areas of said plate undesirably shaded during said imagewise heating exposure of said precursor, see column 4, lines 40-44, and developing said printing plate precursor. See column 4, lines 59-60...."

As amended, claims 12 and 23 are now dependent of claim 1. Claims 13-14 depend of claim 12. Claims 24-26 depend of claim 23. Independent claim 1 includes the limitation that the second radiation frequency spectrum exposure exposes the undesirably unexposed areas of the plate due to unwanted shading, not the areas within the image that are desirably left unexposed.

Applicants respectfully disagree that Holman teaches providing a second exposure to any areas undesirably shaded during the imagewise exposure of the precursor. Holman teaches a process for making bi-metal printing plates by coating such plates with a photoresist composition which is then exposed to a high intensity laser output to harden the photoresist in imagewise fashion. This imagewise exposure hardening is enhanced with a second, non image, overall heating of the photoresist layer as an optional step to improve the insolubility of the originally exposed insoluble portions of the photoresist layer.

The Holman reference makes no mention of the existence of desirably unexposed and undesirably unexposed areas in the same plate and the separate exposure of only those undesirably unexposed areas to the second frequency radiation exposure. Therefore all of the steps claimed in claims 12-14 and 23-26 (both as originally presented and as currently amended to further clarify the presence on the precursor of both desirably unexposed areas and undesirably unexposed areas) are not present (or suggested) in the Holman disclosure, and this rejection should be withdrawn.

V. Rejection of claims under 35 U.S.C. § 103(a).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haley et al. in view of U.S. Patent No. 5,345,870 to Bailey et al.

Claim 4 depends from claim 1 which has been amended and now reads:

"A method for forming a printing plate precursor comprising a radiation-sensitive layer, said radiation sensitive layer exhibiting sensitivity to radiation in a first frequency spectrum and to radiation in a second frequency spectrum other than said first frequency spectrum, said precursor forming a printing plate following imagewise exposure in an exposure device to said radiation in said first frequency spectrum wherein said imagewise exposure (i) generates imagewise exposed and unexposed areas of said plate and (ii) generates undesirably unexposed areas due to unwanted shading during said imagewise exposure, the method comprising identifying and pre-exposing to radiation in said second frequency spectrum prior to placing said precursor in said exposure device said areas of said precursor undesirably unexposed during said imagewise exposure." (Emphasis added)

Claim 4 is rejected as obvious in view of Haley et al. taken over Bailey et al. because:

"Haley et al. teaches all that is claimed, as in the rejection of claims 1-3, except that said undesirable shading results from applying a clamping device on said precursor during said imagewise exposure of said precursor. Bailey et al. teaches a method of producing a printing plate in which undesirable shading results from applying a clamping device on a precursor during imagewise exposure of the precursor. It would

have been obvious to one having ordinary skill in the art at the time of the invention that the undesirably shaded regions of Haley et al. could be produced by the clamping mechanism of Bailey et al., as Bailey teaches, this is a common problem of imagesetters."

Haley, as discussed above, does not teach using a separate exposure to eliminate undesirably unexposed areas of the precursor. Haley simply teaches using the different radiation frequency sensitivity of a plate precursor, (a) for adding imagewise exposed areas in an already imagewise exposed precursor and (b) for changing a positive working plate to a negative working plate.

Bailey teaches pre-exposing areas of a silver halide lithographic plate precursor prior to imagewise exposure following mounting of the plate on the imaging exposure unit using the same radiation exposure source both for the imagewise exposure and the pre-exposure, to eliminate ink receptivity in areas shaded during exposure by the clamping mechanism holding the plate precursor. The exposure is done using the same exposure source in both instances.

Applicants agree that Bailey discloses exposing areas of a printing plate precursor that will not receive exposure during normal imagewise exposure as a result of shading by the clamps holding the precursor in place during exposure just prior to the imagewise exposure.

However the exposure is done on the imaging apparatus using the same radiation source that is used for the imagewise exposure. There is no teaching in either reference that such pre-exposure may be used prior to mounting the precursor to an imaging exposure unit such as a typesetter. Neither reference suggests pre-exposing the plate precursor to a different radiation source to eliminate future problem areas in the finished plate.

The claimed sequence of exposures is not insignificant as the rejection seems to indicate. The pre-exposure of the areas that will eventually be shaded during the imagewise exposure is very significant commercially because it permits pre-exposing the precursors at the manufacturing cite thereby eliminating extra steps during the actual plate making at the use cite. (See page 10, line 21 to page 11, line 1, of the specification of application serial number 10/134,080, incorporated by reference and therefore an integral part of the present application, where it is explained that: "Advantageously, such pre-treatment may be performed at the time of precursor manufacture, eliminating the need to take additional steps at the time of use.").

Therefore, the Bailey teachings when combined with the Haley disclosure do not teach the present invention which eliminates the undesirably unexposed areas of a printing plate by preconditioning, so to speak, the plate precursor before such precursor is mounted on an exposure device, or even prior to the shipment of such precursors to the end user. At best one may say that the suggested combination of references may be enough to induce a person skilled in the art to try pre-exposing

prior to actual imagewise a thermally imageable positive working plate exposure to a different frequency radiation. However, it is not clear from the above references that the effect of the pre-exposure will last over a period of time and whether the pre-exposed areas will exhibit following subsequent development the same ink repellency as the subsequent imagewise exposed areas which are typically processed immediately or very soon after the exposure step.

"Where claimed subject matter has been rejected as obvious in view of a combination of prior art references, a proper analysis under § 103 requires, inter alia, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success. ... Both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the applicant's disclosure." *In Re Vaeck* 20 USPQ2d 1438.

Applicants respectfully disagree that it would be obvious to combine Bailey et al. with Haley to arrive at the present invention. Also for the reasons given, applicants believe that the combination of Bailey and Haley does not provide the required "reasonable expectation of success" and therefore such combination does not render the amended method claimed in claim 1 obvious. Claim 4 includes all the limitations of claim 1 and for the reasons indicated above should be allowed.

Claim 7 has been cancelled, as it has been substantially incorporated in claim 1.

Claims 8-9, and 18-20 now depend of claim 5 which has been indicated as allowable and should also be allowed.

Claims 10-11, 15, and 27 are now dependent of claim 1, and for the reasons given above should also be allowed.

Claim 17 has been cancelled as superfluous.

Conclusions.

For the reasons given above applicants believe that:

- (1) the objections to the specification and drawings have been corrected and should be withdrawn;
- (2) the objections to claims 5,6,16,21 and 22 have been addressed and that these claims together with claims 8, 9, 18, 19, and 20 which have been amended to depend either directly or indirectly from claim 5 should be allowed;

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(3) the rejection of claims 1-3, 12-14 and 23-26 as anticipated by either Haley et al. or Holman III et al. is not proper and therefore should be withdrawn following reconsideration; and

(4) the rejection of amended claims 4, 7-9, 10-11, 15, 18-20 and 27 under 35 U.S.C. 103(a) is no longer proper and should be withdrawn following reconsideration.

Therefore applicants respectfully request entry of this amendment and early allowance of this application as amended.

Respectfully submitted,



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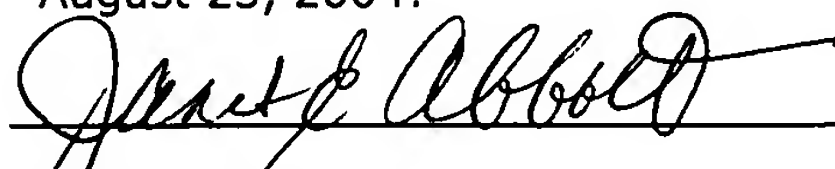
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Janet E. Abbott

